

C L A I M S

1. A pneumatic tyre for vehicle wheels having a size ratio  $f/H$  less than 0.2, comprising a toroidal carcass having a central crown portion and two axially opposite sidewalls terminating with a pair of beads for anchoring of the tyre (1) to a corresponding mounting rim, each bead comprising at least one annular reinforcing core, a tread band (9) placed crownwise, coaxially extending around said carcass and provided with a raised pattern for rolling contact with the ground, and a belt structure (8) coaxially interposed between said carcass and tread band (9), said carcass comprising at least one carcass ply (7) having a continuous right-section profile, the ends of said ply extending in a radially external direction not beyond half the radial height of said annular reinforcing elements, wherein said tyre (1) comprises at least one reinforcing layer (15) associated with said carcass, at a radially external position relative to a point (M) of maximum axial width of said carcass and at a position axially external to said belt structure (8).
2. A pneumatic tyre as claimed in claim 1, wherein said reinforcing layer (15) comprises a substrate (16).
3. A pneumatic tyre as claimed in claim 2, wherein said substrate (16) comprises an elastomer material.
4. A pneumatic tyre as claimed in claim 3, wherein said elastomer material is reinforced with fibres.
5. A pneumatic tyre as claimed in claim 1, wherein said reinforcing layer (15) comprises a plurality of cords.

- 22 -

6. A pneumatic tyre as claimed in claim 5, wherein the cords of said reinforcing layer (15) are of the High Elongation (HE) type.
- 5 7. A pneumatic tyre as claimed in claim 5, wherein said reinforcing layer (15) comprises a substrate (16) of a varying thickness depending on the radial height, said cords being spiralled at a constant pitch.
- 10 8. A pneumatic tyre as claimed in claim 5, wherein said reinforcing layer (15) comprises a substrate (16) of substantially constant thickness, said cords being spiralled at a varying pitch depending on the radial height.
- 15 9. A pneumatic tyre as claimed in claim 1, wherein said reinforcing layer (15) comprises an elastomer material reinforced with fibres.
- 20 10. A pneumatic tyre as claimed in claim 9, wherein said fibres comprise aramidic fibres.
11. A pneumatic tyre as claimed in claim 1, wherein said at least one annular reinforcing core comprises a
- 25 bead ring (5, 6) having a set of coils of metal wire disposed radially superposed on each other and in axial side by side relationship.
12. A pneumatic tyre as claimed in claim 1, wherein the
- 30 extension of said carcass ply (7) between the beads has a neutral profile with a continuous curvature devoid of inflection points.
13. A pneumatic tyre as claimed in claims 11 and 12,
- 35 wherein said neutral profile passes within a field (4)

- 23 -

delimiting the assembly of right-section areas of said at least one bead ring (5, 6).

14. A pneumatic tyre as claimed in claim 13, wherein  
5 said neutral profile passes through the centre of gravity of said at least one bead ring (5, 6).